

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 24 MAR 2006

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Applicant's or agent's file reference 2004281C4089	<b>FOR FURTHER ACTION</b>	
See Form PCT/PEA/416		
International application No. PCT/JP2004/018442	International filing date (day/month/year) 03.12.2004	Priority date (day/month/year) 05.12.2003
International Patent Classification (IPC) or national classification and IPC G06F9/48		
Applicant TOYOTA JIDOSHA KABUSHIKI KAISHA et al.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <ul style="list-style-type: none"> <li>a. <input type="checkbox"/> <i>(sent to the applicant and to the International Bureau) a total of sheets, as follows:</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</li> <li><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</li> </ul> </li> <li>b. <input type="checkbox"/> <i>(sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</i></li> </ul>		
<p>4. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Box No. I Basis of the opinion</li> <li><input type="checkbox"/> Box No. II Priority</li> <li><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li><input type="checkbox"/> Box No. IV Lack of unity of invention</li> <li><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li><input type="checkbox"/> Box No. VI Certain documents cited</li> <li><input type="checkbox"/> Box No. VII Certain defects in the international application</li> <li><input type="checkbox"/> Box No. VIII Certain observations on the international application</li> </ul>		
Date of submission of the demand 26.01.2006	Date of completion of this report 24.03.2006	
Name and mailing address of the International preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  Carciofi, A  Telephone No. +31 70 340-	



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**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
  - This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
    - international search (under Rules 12.3 and 23.1(b))
    - publication of the international application (under Rule 12.4)
    - international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

**Description, Pages**

1-22 as originally filed

**Claims, Numbers**

1-6 as originally filed

**Drawings, Sheets**

1/5-5/5 as originally filed

- a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

- The amendments have resulted in the cancellation of:
  - the description, pages
  - the claims, Nos.
  - the drawings, sheets/figs
  - the sequence listing (*specify*):
  - any table(s) related to sequence listing (*specify*):
- This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
  - the description, pages
  - the claims, Nos.
  - the drawings, sheets/figs
  - the sequence listing (*specify*):
  - any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims	1-6
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-6
Industrial applicability (IA)	Yes:	Claims	1-6
	No:	Claims	

**2. Citations and explanations (Rule 70.7):**

**see separate sheet**

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**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Reference is made to the following document:

D1: BAKER T P ET AL: "THE CYCLIC EXECUTIVE MODEL AND ADA"  
PROCEEDINGS OF THE REAL TIME SYSTEMS SYMPOSIUM. HUNTSVILLE,  
DEC. 6 - 8, 1988, WASHINGTON, IEEE COMP. SOC. PRESS, US, vol. SYMP.  
9, 6 December 1988 (1988-12-06), pages 120-129, XP000118714

2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 does not involve an inventive step in the sense of Article 33(3) PCT.
- 2.1. Document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and insofar as this claim and the corresponding passages in the description can be understood, this document shows the following features thereof (the references in parentheses applying to this document).

*A task management system for executing a task selected from tasks structuring a task combination (cyclic executive supports two modes, with mode 0 controlling four periodic processes and mode 1 controlling another set of processes)(section 4 "Mode changes", first five lines), comprising:*

*a judging unit for judging whether there is a task combination switchover request or not (when an event requesting a mode change is received)(page 123, left-hand column, lines 1-7);*

*a switchover unit for switching over the task combination after completing an execution of a task in the tasks structuring the task combination before the switchover when judging that there is the switchover request (the requested mode change can take place at the end of the current action, at the end of the current frame or at the end of the major cycle); and*

*an execution unit for executing the task selected from the tasks structuring the task*

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*combination switched over by said switchover unit* (the mode is switched and the new set of processes is executed).

- 2.2. The subject-matter of claim 4 therefore differs from this system known from document D1 in that the claimed system comprises:
- a switchover unit for switching over the task combination after completing an execution of a specified task* whereas, in document D1, said specification is not explicitly disclosed.
- 2.3. The technical effect produced by the above identified difference can be regarded as being the improved knowledge about the state of the system because the identity of the last task to be executed before the switchover could take place is known in advance.
- 2.4. The objective technical problem to be solved may thus be regarded as how to provide for a better defined state of the system upon said switchover.
- 2.5. The method of document D1 discloses three possible ways to handle the execution of a switchover request. The corresponding levels of knowledge about the identity of the last task, namely the sets comprising the possible last tasks before the actual switchover, are, in increasing order of determinism:
- i) a set with all the tasks, when the switchover is carried out at the end of the current task,
  - ii) a set with the last tasks of all frames, when the switchover is carried out at the end of the current frame,
  - iii) a set with one task, when the switchover is carried out at the end of the major cycle.

The person skilled in the art, in order to solve the above said technical problem, would regard as a normal design procedure the selection, out of a finite number of equally likely alternatives, of an intermediate way of handling the switchover, namely one which would produce a set comprising only arbitrarily selected tasks, arriving, thus, to a system as claimed.

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- 2.6. Therefore, the subject-matter of claim 1 does not involve an inventive step (Art. 33(3) PCT).

The same reasoning applies, mutatis mutandis, to the subject-matter of claim 4, which is, therefore, also not inventive (Art. 33(3) PCT).

- 2.7. As to dependent claims 2, 3, 5 and 6, their subject-matter is also regarded as being not inventive (Art. 33(3) PCT), the presence of the additional features contained therein being regarded as obvious to the skilled person.

**Re Item VIII**

**Certain observations on the international application**

1. The description is not in conformity with the claims as required by Rule 5.1(a)(iii) PCT. Due to the particular way in which the sentences have been built and to the terminology used therein, the technical problem as well as its solution and the produced advantageous effects can be hardly identified and understood.
- 1.1. Moreover, the description is also not in conformity with the provisions of Art. 5 PCT; with regard to clarity, in particular, a crystal clear contradiction can be identified between the sentence "*Further, another effect is that the task combination can be switched over without executing the process (such as an execution of the task of which the process completion is not requested when switching over the task combination) that should not be processed.*" of page 21, lines 11-15 and the sentence "*Further, another effect is that the task combination can be switched over without executing the process that should be processed.*" of page 22, lines 13-15, which renders the whole description obscure.

**Andrea Carciofi  
(Examiner)**